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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,230	12/21/2003	Nikholas Hubbard	200208474-1	7631

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EXAMINER	
DEBERADINIS, ROBERT L	
ART UNIT	PAPER NUMBER
2836	

NOTIFICATION DATE	DELIVERY MODE
12/09/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/743,230	HUBBARD ET AL.	
	Examiner	Art Unit	
	Robert DeBeradinis	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 24-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,24-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,2,6-10 are rejected under 35 U.S.C. 102(e) as being anticipated by MENAS et al.7,514,814.

CLAIM 1

MEANS et al. discloses an interconnect system (col. 2, lines 55-67, col. 3, lines 1-15) to carry direct current; an electronic device connectable to the interconnect to receive DC and having a communication circuit to transmit signals over the interconnect; and a power supply connectable to the interconnect to provide the DC to the electronic device (fig. 4) and having a decoder circuit to decode the signals received over the interconnect from the electronic device, where the decoder is part of the power supply (col. 7, lines 24-67, col. 8, 1-20).

CLAIM 2

MENAS et al. discloses the system of claim 1, wherein the power supply further has a communication circuit to transmit additional communications signals over the interconnect, and the electronic device further has a decoder circuit to decode the additional communication signals received over the interconnect from the power supply (col. 17, lines 6-64).

CLAIMS 6,8

MENAS et al. discloses the system of claim 1 wherein in one example the electrical connection 410 and/or the data communication connection 412 both may use a single physical connection over which both power and data communication s are transmitted (col. 7, lines 33-37).

MENAS et al. does not disclose wherein the electronic device comprises at least one isolating component to substantially isolate the communication signals from components of the electronic device other than the communication circuit.

An isolating component would have been inherent to the electronic device to isolate or block the high frequency communication signals on the power supply lines supplying power to the electronic device to prevent adverse effects on the electronic device and to pass the communication signals to the communication circuit to communicate with the electronic device.

CLAIM 7

MENAS et al. discloses the system of claim 1 wherein the ASPS interconnects to an electronic device.

MEANS et al. does not disclose an image forming device.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647 (1987).

CLAIM 9,10

MENAS et al. discloses the system of claim 1 wherein the power supply and the interconnect are external to the electronic device.

MENAS et al. discloses the claimed invention except for wherein the power supply and the interconnect are internal to the electronic device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the power supply and the interconnect internal to the electronic device, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-5,11-14,24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over MENAS et al. 7,514,814.

CLAIMS 3-5

MENAS et al. discloses the system of claim 1, wherein the DC to DC regulator 1018 provides DC power to the DC receptacles 1030 at one or more voltage levels. In one example, the DC to DC regulator 1018 is an adjustable switching regulator configured to convert the 24 VDC incoming power to one or more DC voltages. In another example the DC to DC regulator 1018 is a synchronous adjustable switching regulator (col. 16, lines 47-53) and wherein the power supply further has a communication circuit to transmit additional communications signals over the interconnect, and the electronic device further has a decoder circuit to decode the additional communication signals received over the interconnect from the power supply (co. 17, lines 6-64).

MEANS et al. does not disclose wherein the communications signals are one of high frequency pulse-width modulation signals and high frequency square wave-wave signals or wherein the communications signals are high frequency sinusoidal signals or wherein the communication signals are high frequency triangular signals.

The Examiner takes official notice. Modulators or mixers for generating high frequency signals to generate a communication signal is well known to one having ordinary skill in the art and PWM, FM, and triangular signals are all well known signals to one having ordinary skill in the art.

It would have been obvious to one having ordinary skill in the art to have merely chosen a signal type to satisfy the specifications for communication system.

CLAIMS 11-13,24-28

MENAS et al. discloses a direct current interconnect; an electronic device having a principal functionality (the principal functionality is dependent on the type of electronic device i. e. computer, cell phone, printer etc.); and connectable to the interconnect to receive DC and comprising: one or more components to provide the principal functionality of the electronic device and a power supply connectable to the interconnect to convert alternating current from a power source to DC for the electronic device (col. 2, lines 56-67) and comprising one or more components to convert the AC to the DC according to one or more parameters; a decoder circuit to decode the high frequency signals received over the interconnect from the electronic device into the one or more parameters (**claim 2**).

MENAS et al. does not disclose PWM; an inductive isolating component to substantially isolate the high frequency PWM signals from the one or more components of the electronic device; an inductive isolating component to substantially isolate the high –frequency PWM signals from the one or more components of the power supply (**claim 6**).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have provided an isolating component such as an inductor, that inherently blocks high frequencies when placed in series with a line and passes low frequencies or DC, to isolate the high frequency communication signals from the components of the electronic device and pass the DC power to the electronic device so that the electronic device receives power to operate without high frequencies interfering with the electronic device and have the means to communicate with the power supply

and the power supply is able to receive the communication from the electronic device without the high frequency communication signals from the electronic device interfering with the operation of the power supply.

CLAIM 14

MENAS et al. discloses the system of claim 11 wherein the ASPS interconnects to an electronic device.

MENAS et al. does not disclose an image forming device.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647 (1987).

Claims 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over MENAS et al. 7,514,814 in view of STANESTI et al. 7,126,241.

CLAIMS 29-34

MENAS et al. discloses the device transmitting signals over a conductor of an interconnect carrying direct current for the device; receiving the signals over the conductor by a power supply for the device; and converting alternating current to DC according to one or more parameters.

MEANS et al. does not disclose encoding one or more parameters into signals by a device; decoding the one or more parameters from the signals by the power supply.

STANESTI et al. discloses encoder 6 (col. 3, lines 5-29) and communication over the existing power lines using modulation and demodulation techniques known in the art to communicate available power data over the existing power lines (col. 5, lines 50-54).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the communications with an encoder and decoding means to provide a serial coding format.

Any inquiry concerning this communication should be directed to Robert L. DeBeradinis whose number is (571) 272-2049. The Examiner can normally be reached Monday-Friday from 8:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jared Fureman can be reached on (571) 272-2391. The Fax phone number for this Group is (571) 272-8300.

RLD

NOVEMBER 30, 2009

/Robert DeBeradinis/

Primary Examiner, Art Unit 2836